

# ANALYSIS OF LOCAL ADVANTAGES IN THE MAIN CEREAL BAR INDUSTRIES OF THE STATE OF SAO PAULO

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## Abstract

The state of São Paulo is home to an articulated network of local advantages (services, technologies, transportation, labor, and markets) responsible for attracting the main Brazilian production of cereal bars. This plot is based on an urban network with metropolises, large and medium-sized cities that are holders of large population contingents, which still represent important markets. To understand the search for these attractive spaces, the article investigated the locational factors of the main cereal industries in the state of São Paulo. Therefore, the following methodological procedures were adopted: a) literature review based on classical and contemporary authors in the subject; b) documentary and statistical survey; c) field research. In the domestic market, it was found that there are few, but large industries, that hegemonically dominate the production of cereal bars. In the case of the present research, the following industries were investigated: Kobber Alimentos Ltda. (Diadema), Nestlé do Brasil Bebidas e Alimentos Ltda. (Caçapava) and Trio Alimentos Ltda. (Sorocaba). The cities above contemplate the spatial cutting of the research, having as a time frame the last two decades (2000 to 2020). This qualitative and semi-structured research is based on Santos (1996), who highlighted the importance of form-content and how this relationship dialectically influences space.

**Keywords:** Local advantages, Manufacture Deconcentration, Cereal Bar Industry, State of São Paulo.

## Resumo / Resumen

### ANÁLISE DAS VANTAGENS LOCACIONAIS NAS PRINCIPAIS INDÚSTRIAS DE BARRAS DE CEREAIS DO ESTADO DE SÃO PAULO

O estado de São Paulo abriga uma rede articulada de vantagens locais (serviços, tecnologias, transportes, mão de obra e mercados) responsável por atrair a principal produção brasileira de barras de cereais. Esta trama encontra-se lastreada em uma rede urbana com metrópoles, cidades grandes e médias que são detentoras de grandes contingentes populacionais, os quais representam ainda importantes mercados. Para compreender a busca por esses espaços atrativos, o artigo investigou os fatores locais das principais indústrias de cereais do estado de São Paulo. Dessa forma, foram adotados os seguintes procedimentos metodológicos: a) revisão da literatura ancorada em autores clássicos e contemporâneos na temática proposta; b) levantamento documental e estatístico; c) pesquisa de campo. No mercado nacional, verificou-se que são poucas, porém grandes indústrias que dominam hegemonicamente a produção de barras de cereais. No caso da presente pesquisa, foram investigadas as seguintes indústrias: Kobber Alimentos Ltda. (Diadema), Nestlé do Brasil Bebidas e Alimentos Ltda. (Caçapava) e a Trio Alimentos Ltda. (Sorocaba). Os municípios compreendidos acima contemplam o recorte espacial da pesquisa, tendo como recorte temporal as últimas duas décadas (2000 a 2020). Essa pesquisa qualitativa e semiestruturada se fundamenta em Santos (1996), que destacou a importância da forma-conteúdo e como essa relação influencia dialeticamente o espaço.

**Palavras-chave:** Vantagens Locacionais, Desconcentração Industrial, Indústria de Barras de Cereais, Estado de São Paulo.

### ANÁLISIS DE LAS VENTAJAS LOCALES EN LAS PRINCIPALES INDUSTRIAS DE BARRAS DE CEREALES DEL ESTADO DE SÃO PAULO

El estado de São Paulo alberga una red articulada de ventajas locales (servicios, tecnologías, transporte, mano de obra y mercados) responsable de atraer la principal producción brasileña de barras de cereales. Esta parcela se basa en una red urbana con metrópolis, ciudades grandes y medianas que son titulares de grandes contingentes de población, que todavía representan mercados importantes. Para comprender la búsqueda de estos espacios atractivos, el artículo investigó las ventajas locales de las principales industrias de cereales en el estado de São Paulo. De esa forma, fueron adoptados los siguientes procedimientos metodológicos: a) revisión de literatura anclada en autores clásicos y contemporáneos sobre el tema propuesto; b) levantamiento documental y estadístico; c) investigación de campo. En el mercado nacional se encontró que existen pocas, pero grandes industrias, que dominan hegemonicamente la producción de barras de cereal. En el caso de esta investigación se investigaron las siguientes industrias: Kobber Alimentos Ltda. (Diadema), Nestlé do Brasil Bebidas e Alimentos Ltda. (Caçapava) y Trio Alimentos Ltda. (Sorocaba). Los municipios incluidos anteriormente contemplan el corte espacial de la investigación, teniendo como marco temporal las dos últimas décadas (2000 a 2020). Esta investigación cualitativa y semiestructurada se basa en Santos (1996), quien destacó la importancia de la forma-conteúdo y cómo esta relación influye dialécticamente en el espacio.

**Palabras-clave:** Ventajas locales. Desconcentración Industrial. Industria de Barras de Cereales. Estado de São Paulo.

## INTRODUCTION

This article is the result of analysis developed during the doctoral research, entitled: “The productive sector of cereal bars in the state of São Paulo: Spatial production circuits, cooperation circles and socio-spatial implications”, conducted between 2018 and 2021. Specifically, the article comprises the search of an industry sector for new attractive spaces for the installation of manufacturing units in the interior of the state of São Paulo.

From 1970, there was a deconcentration of industries located in the Metropolitan Region of São Paulo (MRSP) towards the interior of São Paulo and to other Brazilian states, mainly to those places that had spatial attractiveness, tax incentives and infrastructure conditions. Therefore, the MRSP presented agglomeration diseconomies. According to Oliveira (1976), the high cost of labor, problems with the flow of goods, the high cost of premises inhibited new investments in the metropolises and determined the transfer to more viable areas.

Within the process of industry dispersion, it should be noted that the depopulation of the countryside made possible the growth of the implantation of factories in the interior of São Paulo. It should be mentioned that, in addition to the MRSP, the interior of São Paulo has developed transport and communication infrastructures. Industrial dispersion made possible the implantation of large industries in areas far from the metropolis, which generated jobs and fortified local and regional development in new Metropolitan Regions.

According to Mendes (1991), in the interior of São Paulo, other regions began to attract industries from the industrial deconcentration of the MRSP, such as: Campinas, Sorocaba, São José dos Campos and Ribeirão Preto. The industrial concentration in the MRSP generated environmental problems that were added to the specific plans and legislation, contributing for the industries, spontaneously and induced, to look for new spaces (cheaper, with less unionized labor and with attractive municipal policies) in the interior of the state of São Paulo.

According to Mendes and Selingardi-Sampaio (1987), the deconcentration of industry can occur spontaneously or induced. In the former case, the initiative to relocate the MRSP comes from the companies, while, in the second case, the State interferes directly in the locational choices. Territorial planning policies minimize the urban and environmental impacts that the industry carries with it, such as pollution. Likewise, industry can contribute to the generation of jobs, new demand for services, orderly growth of cities and attraction of new industries, research centers and Universities. Therefore, the new industrial plants required a contingent population that when finding appropriate conditions in the interior of the state of São Paulo, reshaped the territorial role of towns and medium-sized cities in terms of the city-region. In short, it was found that the cereal bar industries were influenced by this deconcentration movement.

## PRODUCTIVE RESTRUCTURING AND INDUSTRIAL DECONCENTRATION IN THE STATE OF SÃO PAULO

The city of São Paulo acquired a new role in the Brazilian urban network, that is, the centralization of new forms of accumulation in the service sector, based on the centralization of financial capital, qualified social capital and new technical-scientific-informational networks that specialize in the service sector. According to Lencioni (2004), the city of São Paulo confirms and develops its centrality, inserting itself as a node in the world network of global cities, in a process of expanding concentration.

The territorial concentration of innovative and high technology industry has the city of São Paulo as its center. In this way, the metropolis shelters the intellectual command of the technical portion of production and regulates administrative activities at a distance from production, which is located in distant spatialized areas, for example, in the MRSP, in the interior of São Paulo or even in other states.

The deconcentration of industrial activities in the MRSP was occasioned by the saturation of the metropolis' capacity to meet the needs of new industrial demands. Among the problems reported, it is possible to highlight the strangulation of infrastructures, difficulties linked to the high charges of municipal taxes, intense traffic flow, gentrification, difficulty in moving production and workers, high levels of pollution, among other factors.

The relative industrial and population migration to the interior of the state reinforces the process of productive deconcentration. According to the demographic aspects from census 1980 (IBGE, 1980) and 2010 (IBGE, 2012) the municipalities of the MRSP presented, in general, a much more expressive demographic growth than the capital. Consequently, there was a demographic growth in the interior of the state, mainly in the Metropolitan Regions of Campinas and Sorocaba.

The relative demographic deconcentration of the city of São Paulo towards the interior of the state can be understood as part of an important productive transformation that has been taking place in the city in recent years. According to table 1, the maintenance of formal jobs indicates the tendency of deconcentration of the industrial sector between 1991 and 2005.

State of São Paulo	1991	1995	2000	2005	2010
MRSP	1.459.414	1.246.834	981.731	1.073.119	1.287.676
Interior	969.758	955.477	952.836	1.219.808	1.612.637
City of São Paulo	869.090	712.459	514.431	521.237	615.276
State total (MRSP + Interior)	2.439.172	22.020.311	1.934.567	2.292.927	2.900.313

Table 1 – Formal employment in the industrial sector of the state of São Paulo (1991-2010). Source: elaborated by the author from the Ministry of Labor and SEADE Foundation.

Industrial employment, however, grew more intensely in the interior than in the capital. In this way, in 2005, the interior already exceeded the jobs generated by the entire MRSP. While, between 1991 and 2010, the interior gained 642,000 new industrial jobs, the MRSP (except the city of São Paulo) gained 82,000.

The city of São Paulo is important for the Brazilian industry. Its broad and diversified industry is made up of different important economic sectors, establishing linkages and synergies with the remaining of the MRSP and the country. However, its economic expansion remains concentrated in the service sector, showing a loss of industrial dynamism in São Paulo.

## RETHINKING LOCATIONAL FACTORS IN THE INDUSTRY

From the emergence of the toyotist regulation mode or flexible production, it is necessary to rethink the locational factors of the industry. With the economic restructuring that took place from the 1970s onwards, trade opening and the deregulation of the economy developed new dimensions of the industry's location issue, corroborating new location factors.

For Firkowski (2002), the new location factors are the quality of training of the labor, the existence of a teaching and research structure, tax incentives, urban networks integration telecommunications and transport networks, etc. The new locational model contemplates urban space configuration factors such as: cultural and leisure aspects, environmental policies and the integration of the city with the environment.

According to Diniz e Crocco (1996), with regard to urban space, as well as aspects of entrepreneurship and innovation. Azzoni (1986) highlights the role of urban aspects as a factor in the industry's locational decision, not only in terms of the city, but with respect to the region where it operates, defining the regional attraction for industrial activity.

This phenomenon resulted in the depletion of the comparative advantages of the city of São Paulo. In this way, some factors contributed to the industrial dispersion towards the interior of the state, such as: the growing scarcity and consequent increase in the price of land, the intense union activity in the cities of ABCD Paulista, the adverse effects caused by the excessive urban agglomeration, the traffic, high costs of working-class housing, restrictions on the supply of public services, among others.

The current locational factors are the supply of raw materials; abundant, qualified and cheap

labor; energy distribution channels; bustling local and regional markets; infrastructure with transport and communications networks; tax incentives and industrial public policies; and flexibility of fiscal, tax and environmental legislation. This understanding defines the current space in which industry operates, highlighting the location of economic activity and the services linked to it.

According to Diniz (1993), the causes of the deconcentration would be the establishment of agglomeration economies in other urban centers, the industrial replacement for new sources of natural resources and a new policy of investments in transport and communication. Furthermore, the process of growth of medium-sized cities sheltered the growth of industrial zones that attracted incentives for the installation of Universities, technology incubators and research and development centers.

## THE MAIN INDUSTRIES OF CEREAL BARS AND THE STATE OF SÃO PAULO

In 2020, the food sector, specifically cereal bars, consisted of 52 companies, 28 of which were located in the state of São Paulo. In addition, SA.Varejo (2020) stated that only the 3 industries (Nestle, Trio Alimentos and Pepsico) installed in the state of São Paulo have 40% of the supply of cereal bars in Brazil in 2020. Thus, the spatial cutting comprises the state of São Paulo. The reason for this choice is that this is the largest producer of cereal bars in Brazil. Therefore, the state of São Paulo has the largest tangible and intangible flow of this product.

The Brazilian Association of Food Industries (BAFI), through direct research, stated that the biggest jump in the cereal bars sector in the state of São Paulo was between the years 1998 to 2002, when sales growth was 20% per year. Subsequently, the cereal bars sector reached less expressive numbers, due to the consolidation of the product in the market. However, BAFI reported that the different typologies and new taste standards made the sector grow again in 2010, moving about R\$ 100 million in the state of São Paulo.

It is important to highlight the study by SA.Varejo (2020), which was widely used as a source of primary and secondary data in this research. The study had the participation of 3,445 retailers from all over the country who indicated, in a questionnaire, the three best-selling brands in their stores in the cereal bar segment. After receiving the questionnaires, weights were assigned to the brands according to the order in which they were indicated, giving rise to the share of mind<sup>1</sup> of each one. The next step was to classify them in descending order of total supply index in Brazil. From this, the classification of companies by category, mentioned above, was reached.

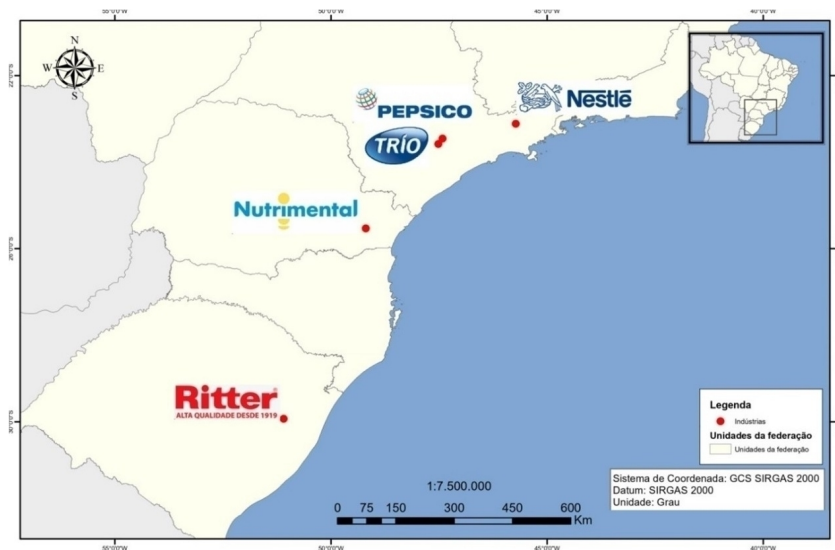


Figure 1 - The five main industries producing cereal bars in Brazil. Source: elaborated by the author from SA.Varejo (2020).

In the national market, there are few, but large industries, which hegemonically dominate the production of cereal bars. According to SA.Varejo (2020) survey, the five main industries producing cereal bars in Brazil are: 1) Nutrimental (São José dos Pinhais-PR), 2) Nestlé (Caçapava-SP), 3) Trio Alimentos (Sorocaba-SP), 4) Ritter (Cachoeirinha-RS), and 5) Pepsico (Sorocaba-SP), as shown in figure 1.

The industries selected in the survey were: Nestlé, Trio Alimentos and Kobber, located respectively in the following cities: Caçapava, Sorocaba and Diadema. It should be noted that the industries mentioned above are of different sizes and levels of capital, performing linkages between different sectors and companies. Initially, the survey included the three main industries producing cereal bars in the state of São Paulo, however, due to the numerous frustrated attempts at contact, Pepsico was replaced by Kobber.

Kobber Alimentos Ltda. was founded in 1994 in São Bernardo do Campo. The industry has activity in the food sector, the main one being the manufacture of cookies, biscuits and cereal bars. Currently, its manufacturing unit is located north of the city of Diadema, in Jardim Campanário. The neighborhood is affected by social vulnerability, having the third highest rate of beneficiaries of the Bolsa Família Program in the city. However, the neighborhood has a concentration of industries from other productive branches, such as metallurgy.

The manufacturing unit is unique, being the headquarters of the administrative and productive sectors. As shown in figure 2, the total area of the industry covers 13,000 m<sup>2</sup>, in a fully industrialized space, which comprises large industrial ovens, mats and machinery necessary for its production. According to the questionnaire carried out with Kobber, the industry is located in Diadema due to the low installation cost, tax incentives (IPTU, ISS, ITBI), easy access to road and air modes (Imigrantes, Anchieta and Rodoanel highways and Congonhas and Guarulhos airports), proximity to the port of Santos and the main shopping centers in São Paulo. Therefore, the territorial attractions and the location were decisive factors for the implantation of the factory unit.

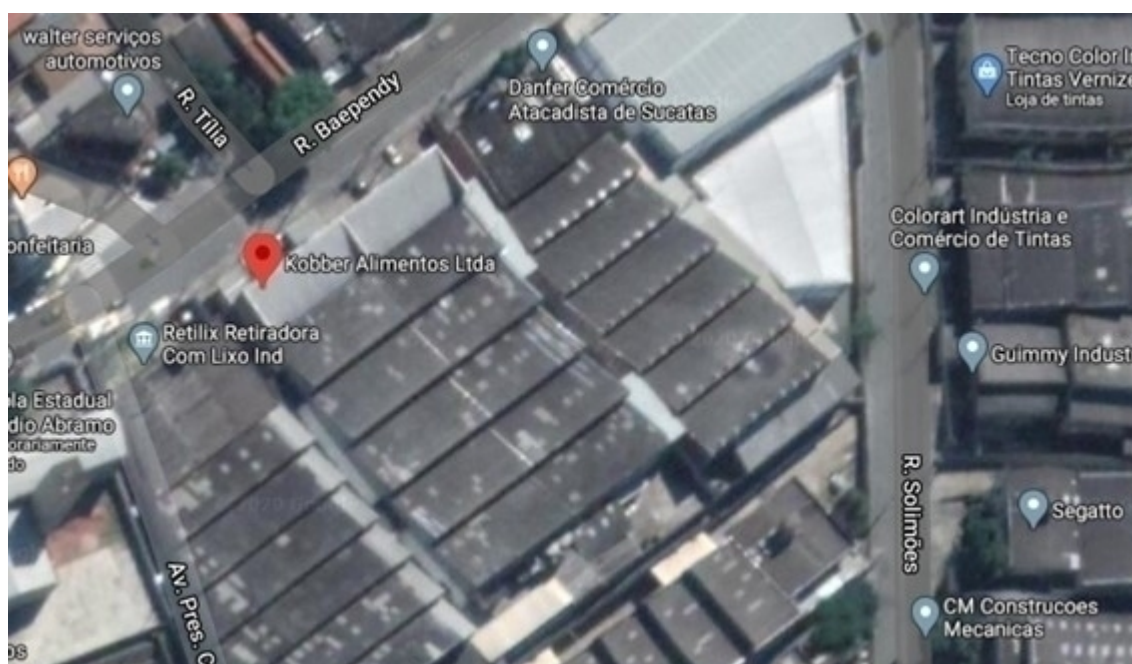


Figure 2 - Aerial image of Kobber manufacturing unit. Source: Google Earth (2020). Author's spatial cutting.

In 1990, Trio was founded in the food sector. At the beginning of the activities, the industry supplied rice to the state of São Paulo. Currently, the industry produces only cereal bars. In 1996, the first manufacturing unit was installed in Vila Olímpia, in São Paulo. However, the industrial deconcentration of São Paulo and the development of the Macrometropolis of São Paulo (LENCIONI,

2011) made Trio transfer its manufacturing unit to Sorocaba in 2000, where it remained until the present research, attracted by the low installation cost and proximity to Campinas and São Paulo (both 100 km away). It should be stressed that tax incentives (IPTU, ISS, ITBI) were granted by the city before and after installation. As shown in figure 3, the manufacturing unit is unique, being the headquarters of the administrative and productive sectors.



Figure 3 - Aerial image of Trio Alimentos industry. Source: Google Earth (2020). Author's spatial cutting.

It should be mentioned that Trio transferred the manufacturing unit again at the end of this research. This time, the industry moved to the city of Valinhos-SP, belonging to the Metropolitan Region of Campinas. The change was consolidated in 2022, evidencing the ease in the flow of goods as it is located along Anhanguera Highway (SP-330).

In 1905, Nestlé was founded by the Anglo-Swiss company. Since its founding, the company has been organized according to the technical and technological development that allows the structuring of material and immaterial networks. In Brazil, according to the research conducted, Nestlé can be considered a territory of making. Among its territorial division of labor, the headquarters are located in São Paulo, in addition to 31 manufacturing units located in 8 Brazilian states, with 12 units found in the state of São Paulo. Furthermore, the centrality of activities related to the cycle of the capital is articulated in its headquarters in Switzerland.

The manufacturing unit in Caçapava is located in the Southwest of the city, in Vila Galvão. The neighborhood has a concentration of industries from different productive branches and service sectors to meet the demands of industries. The manufacturing unit is a subsidiary and it is located along the Presidente Dutra Highway (BR-116), which connects the city of São Paulo to Rio de Janeiro. Therefore, it emphasized a locational advantage again. As shown in figure 4, the total area includes 600,000 m<sup>2</sup> of land in a fully mechanized space that includes a museum, a store and an auditorium.

In view of Nestlé's structure, it is worth considering that the territories are normalized among verticalities, by agents that act on multiple scales (SANTOS, 2003). The agents articulate with the national, regional and local political power in their interest. And they manipulate the political sphere and society in general, in order to impose their ideology on consumers.



Figure 4 - Aerial image of Nestlé manufacturing unit in Caçapava. Source: Google Earth (2020).  
Author's spatial cutting.

## LOCATIONAL ADVANTAGES AND DISADVANTAGES OF SELECTED INDUSTRIES

Over time, the interior of São Paulo presented advances in infrastructure, coming from the coffee complex. At the same time, there was a relative industrial deconcentration of the factories in the MRSP, after the year 1970, when the MRSP presented high maintenance costs for the factories (land, rent, energy, water and taxes) and socio-spatial problems increased (violence, inequality, infrastructure and logistics). Therefore, the interior of São Paulo has historically enabled the installation of new industries.

It should be stressed that each city surveyed has specific historical, economic and social conditions that comprised the dynamics of attracting new industries. In the case of Sorocaba, textile industries of English origin settled in the region to consolidate the so-called “Manchester Paulista”. The textile hub was boosted by the construction of the old Sorocabana railroad, which generated many jobs and the urbanization of this region. From 1970, there was a decline in textile production and the diversification of the industrial park with the arrival of industries from the RMSP, a movement strengthened by the “diseconomies of agglomeration”. In that time, industrial deconcentration began a process of restructuring the economy and the urban-regional space (LENCIONI, 1994).

In the case of Caçapava, located along the Presidente Dutra Highway, the rapid population growth, boosted by the arrival of new industries, generated demands for new housing spaces and for the development of activities linked to the secondary sector. Therefore, these activities contributed to the city presenting a spatial configuration marked by discontinuities and fragmentation of space.

The spatial circuits of production, even if influenced by locational factors, are directly or indirectly involved in a global logic articulated and dense by a global mesh. As the circuit commands the valorization of space, the life of all places is disturbed by their differentiated roles in the international division of labor (MORAES, 2017). However, the presence of capitalism becomes universal, and this process evolves spatially unequally, as well as noted in Caçapava.

Locational factors are intrinsically associated with the concept of productive spatial circuit, especially when it facilitates the connection between different points and nodes in space. In this way, the

movement that permeates the understanding of the concepts allows the circulation of material and immaterial flows, tangible or intangible, in the way that the set of activities in the space become dynamic. The presence and distribution of different attractive points throughout the territory show the unequal way in which the territory is appropriated (SANTOS, 1994), observed, particularly, with the deconcentration of the industries selected in the research.

In short, the cities of Sorocaba and Caçapava underwent changes with the industrial deconcentration of the MRSP. In the case of Diadema, this has always been focused on supplying other industries in the ABC region of São Paulo, especially with regard to automotive parts, its economy suffered from the high cost of labor, land, rents, taxes and logistical problems. Currently, the city is diversifying the industrial sector, with civil construction and cosmetics.

Among the locational factors that led entrepreneurs from the cereal bar industries to choose the interior of São Paulo, it is worth stressing: cheap and qualified labor, infrastructure of access roads, transport and communication, proximity to the consumer market, Universities, airports and ports, tax incentives, such as the installation of infrastructure, ITBI IPTU, ISSQN and Habite-se (Table 2).

Locational factors	Nestlé	Trio	Kobber
Access to cheap and skilled labor	X	X	
Access to carriers			X
Low cost of installation	X	X	
Transport network and goods flow	X	X	X
Proximity to the consumer market			X
Tax incentives	X		

Table 2 - Locational factors of the surveyed industries. Source: elaborated by the author based on Direct Research (2021).

It should be noted that the low cost of installation, the transport infrastructure and the easy flow of goods are the locational factors that were most mentioned by the industries. Thus, classic factors related to their locations were evidenced. With regard to the location of the surveyed industries, the proximity to the main highways in the state of São Paulo is highlighted below:

- 1- Nestlé is located along the Presidente Dutra Highway (SP-060 or BR-116);
- 2- Trio is located along the Anhanguera Highway (SP-330);
- 3- Kobber is located 2 km from the Imigrantes Highway (SP-160);

With Regard to the labor employed it varies, between the selected industries in administration or production. It is fair to consider that Nestlé, due to its size, is the industry that employs the most (table 3). It is worth mentioning that Nestlé and other industries that use the technological innovations of the Fourth Industrial Revolution coexist with structural unemployment.

Locational disadvantages	Trio	Kobber
Significant action of the union movement	X	X
Lack of improvements in access roads	X	
Lack of tax incentives	X	X
Significant distance to the port of Santos		
Heavy traffic	X	X
High costs (fees and taxes)		X

Table 3 - Employed labor and the size of the industries surveyed. Source: elaborated by the author based on Direct Research (2021).

According to Schumpeter (1942), creative destruction is a reflection of the deepening of technique, creating wealth, but also social disturbances considered unfair by communities over time. Therefore, it is necessary to maintain more formal jobs through advances in technology, balancing the relations of power, capital and labor force.



Nestlé was the only industry that reported receiving some kind of tax incentive. In this way, it is possible to understand the size of its influence for the city of Caçapava and for the state of São Paulo. With regard to the city, this industry exerts influence, mainly, in the generation of jobs, collection of fees and taxes (ISS, IPTU, operating license and health surveillance license). For the state of São Paulo, collection basically occurs on the Circulation of Goods and Provision of Transport Services (ICMS) and the Environmental License (CETESB).

With respect to Kobber, the industry was the only one that considered the proximity of the manufacturing unit to the consumer market. The industry, which is located in the MRSP, has a direct sales channel through the Whatsapp<sup>2</sup> application. Thus, consumers can order products such as cereal bars through an in-app dialog. According to Kobber, this type of sale grew 20% in recent years, concentrating its consumers in the city of São Paulo.

In locational terms, it appears that the state of São Paulo significantly concentrates the largest number of production units, that is, the Macrometropolis of São Paulo or the city-region is still largely responsible for the development of the food sector, mainly for production of cereal bars. However, the industries selected in the survey have two main competitors, which are located in Paraná and Rio Grande do Sul, respectively: Nutrimental and Ritter.

It should be noted that the classic locational factors were more prominent, since all the industries analyzed mentioned the importance of quality in the training of the workforce, the existence of a teaching and research structure, tax incentives, integration into urban networks, the telecommunications networks and the flow of goods by road (FIRKOWSKI, 2002). Among other socio-spatial factors, it was found that none of the surveyed industries is installed in Industrial Districts or Condominiums.

Proximity to São Paulo and to the highways for transporting production is the most relevant factor in choosing the territory used by the selected industries, as the necessary conditions for fluidity and agility in the reproduction of capital are found in this space. However, as companies are inserted in value chains of different sizes, it is emphasized that proximity to the metropolis of São Paulo is not essential.

In this context, the cities of Sorocaba and Caçapava perform important functions related to the surveyed industries, aggregating structured networks of companies and public and private educational institutions that are directly linked to the food sector. These cities have, on the one hand, Universities, technology colleges, technical schools responsible for the qualification of the workforce, and, on the other hand, support services, namely: carriers, analysis laboratories, packaging development companies, importers and exporters, food services, cleaning, surveillance, financial and legal consulting, among others. According to Diniz (1993), these services created economies of agglomeration in medium-sized cities, contributing to the dispersion of industries in the state of São Paulo.

With regard to locational disadvantages, Kobber stated that road transport traffic, especially during the rush hour, interferes the flow of goods. Reproduction costs (taxes and monthly fees) and the union activities of the ABCD region, inserted in São Paulo also represent obstacles to increasing development. Thus, the industry considers moving to the interior of São Paulo. Table 4 organizes the information on the locational disadvantages of the industries selected in the research, considering that Nestlé didn't respond to this questionnaire.

Main policies to encourage the installation of new industries	Caçapava	Diadema	Sorocaba
Discount on IPTU for up to 10 years		X	
IPTU exemption for up to 10 years	X		X
ISSQN exemption for 12 months	X	X	X
ITBI fee exemption	X	X*	
Habite-se fee exemption	X		
Land donation	X		

Table 4 - Locational disadvantages of industries surveyed: Except Nestlé. Source: elaborated by the author based on Direct Research (2021).

Based on this, there are, then, the locational disadvantages between the MRSP, the Macrometropolis of São Paulo and the city of Sorocaba. The MRSP has a higher reproduction cost, such as: land, rent, energy, water, taxes and fees, in addition to union movements, which are intensified by the significant number of industries located there. In the case of the Macrometropolis, monthly costs are reduced compared to the city of São Paulo, but the industries encounter difficulties in access roads for the flow of goods.

The lack of industrial policies in the cities during the years when the surveyed industries were installed was also investigated and it was found that political decisions were based on the free market and on “fiscal wars” between neighboring cities. According to Table 5, it is possible to understand the main industrial attraction policies adopted by the cities surveyed, between the years 2010 to 2020.

Main policies to encourage the installation of new industries	Caçapava	Diadema	Sorocaba
Discount on IPTU for up to 10 years		X	
IPTU exemption for up to 10 years	X		X
ISSQN exemption for 12 months	X	X	X
ITBI fee exemption	X	X*	
Habite-se fee exemption	X		
Land donation	X		

Table 5 - Attractive policies for new industries (2010-2020). Source: elaborated by the author based on Direct Research (2021).

As verified in the questionnaires applied to the industries, it is necessary to carry out some considerations regarding the industrial attractiveness policies of the surveyed cities:

1) Caçapava: Among the cities investigated, it was the only one that donated land to new industries. The strong program of tax incentives granted by the city highlights the reduction and exemption of taxes. Furthermore, the construction of a new airport, called Aerovale, is underway, which is expected to install 314 new companies, 124 of which are directly related to aviation.

2) Diadema: The city has a tax incentive program called “Diadema de portas abertas para sua empresa”. This public access document proposes: a) 50% discount on IPTU for companies that opt for the simple national tax, with different benefit periods depending on the number of employees; b) creation of the Development Incentive Certificate; c) discount equivalent to 40%, accumulated in the first 12 months of ISSQN collected, limited to the value of the IPTU; d) discount of up to 50% on the IPTU value for companies that prove an increase in added value; e) for cooperatives, a discount of up to 80% will be granted on the value of the annual IPTU assessment; f) discount of up to 50% on the IPTU assessment value for properties for which the city issues a Licence approval, Execution of Construction and Construction Expansion that generate 100 direct jobs.

3) Sorocaba: In order to promote and foster development, the city encourages the installation of new industries and companies, as well as the expansion of those industries whose manufacturing unit is already in operation and which represent an addition to the fiscal added value. The last tax incentive program was regulated by Municipal Law of Sorocaba nº 12.099.2019. Table 6 shows all tax incentives in force since 2019. It should be mentioned that Sorocaba was the only city that reported granting tax incentives to increase the number of 4.0 industries.

Taxes	Benefits	Benefit duration
IPTU	100%	from 2 to 12 years
ISS	rate to 2%	from 2 to 12 years
Construction rate and project approval	100% fee reduction	from 2 to 12 years
Supervisory fee and operation	50% fee reduction	from 2 to 12 years
ITBI	50% fee reduction	from 2 to 12 years
ISSQN due for services within the concept of Industry 4.0	2% fee reduction	from 2 to 12 years

Table 6 - Tax incentive policies in Sorocaba. Source: elaborated by the author based on Direct Research (2020).

## CONCLUSION

It is worth considering that the cereal bar industries were influenced by the process of industrial deconcentration, caused by locational disadvantages in the metropolis of São Paulo. Although these industries emerged from the 1990s onwards, in the state of São Paulo, the effects of the “diseconomies of agglomeration” continued to condition the option for new industries to settle in the interior of the state. Firstly, this movement was carried out by expanding the metropolis to a city-region, comprising the cities located in a radius of approximately 200 kilometers from the city of São Paulo-SP.

Currently, as found in the research, the cities of Caçapava and Sorocaba are located in the macrometropolis of São Paulo, and already have locational disadvantages, such as: an increase in the cost of land, labor, rents, union representation and logistical problems. For example, the industries located in these cities reported an increase in traffic and the cost of reproduction. Therefore, the surveyed industries are studying the possibility of transferring their manufacturing units to other cities far from the macrometropolis of São Paulo.

With regard to the socio-spatial implications, the possibility of transferring the surveyed industries can lead to the unemployment of many workers in these cities, mainly at Nestlé, that directly or indirectly provide services to production. As noted in the survey, cities like Caçapava, depend exclusively on these industries to continue investing in infrastructure, job creation and attracting new companies.

In this sense, cities far from the macrometropolis of São Paulo are also polarized by other urban centers. However, these urban centers are small or medium-sized cities that play the main role of locational attractiveness. In these cities there are universities, research centers, provision of specialized services and even an infrastructure capable of ensuring good conditions for the installation of new industries.

As a result, other cities in the interior of São Paulo become attractive for their spatial organization and for being inserted in the two circuits of the urban economy (lower circuit and upper circuit). It is from the establishment of networks that these municipalities far from the city-region guarantee the circulation and fluidity of their spaces. Therefore, networks eliminate distances and spatial nodes, ensuring that material and immaterial flows pervade different scales: local, regional and global.

The presence and distribution of networks throughout the territory provide movement to production and also reveal the unequal way in which the territory is appropriated. Integration is due to the fact that each urban center is part of several networks of cities that play multiple roles and are associated with the corporate use of multinationals. As verified in the research, Nestlé uses the territory from a small city in the interior of São Paulo, as it is organized in a network emanating its flows to other countries where its technical and administrative portion is located.

The results of this research situated the set of locational variables that compose the spatial circuits of production and the cooperation circles of the cereal bars industries. Comparative analyzes between industries allowed analyzing the use of territory and place.

## NOTES

1- The share of mind is a marketing tool that seeks to measure, through statistical data, how much people think about a certain company and the solutions that it offers. In this way, a high index means that the customers were loyal and consume their products.

2- Instant messaging and voice calling application for mobile phones.

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Cano, F.C.S. - The author elaborated the entire text.

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